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Gender roles and relationships: Implications for water management

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Abstract

This study mainstreams gender at household level by showing how the gendered roles and relations between women and men influence access, allocation and use of resources in a rural community, Makhosini, in Swaziland. Implications of the identified gender roles and relationships for water management in Swaziland are highlighted. The working hypotheses of this study are (i) that gender-neutral development initiatives will benefit equally women and men at household level; and (ii) in Swaziland the trend toward irrigated agriculture for food security will have unequal impacts on men and women as access, allocation and use of key resources is highly gendered, privileging men as the value of the resource increases.

In this study, a questionnaire was administered to sampled male and female heads of household as well as women under male heads. The heads were asked to indicate the roles they play and key decisions they make in resource use as heads of households. The women under male heads were also asked to indicate their roles and key decision responsibilities. The key resources considered were land and crops produced. Comparative analysis on roles and decisions made as well as access and use of resources and production was done by gender and between the women groups.

The results show marked gender differences within households and across resources. Men were overwhelmingly involved in productive roles, giving low priority to reproductive roles. In contrast, priority of women's roles were reproductive in nature. The key findings are that there were no significant differences in the roles of men and women as heads of households. Women as heads of households assume the same roles as those of men heads suggesting relative gender-neutrality. Also all women played "double-day" roles. However, the data reveals that men dominate decisions on crops to be grown, inputs to be used, disposal of the products and use of income obtained. Only a small percentage of women claimed influence over decisions on high-income generating crops such as sugarcane. A majority of women did demonstrate influence in the areas of key rainfed crops such as sweet potatoes and maize. The only area where women had full control was on grass used for making handicrafts.

The implications for water resources management are that gender-blind decisions regarding the importance of irrigated crop production for household security may in fact remove decision-making capacity out of the hands of women so increasing the gendered-nature of food insecurity. At the same time, however, women household heads do show some influence in irrigated crop production and in high-value rainfed crop production. This suggests possibilities for in-building gender-neutral practices where high value crops are concerned.
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Keywords: Gender roles; Gender relations; Household level; Water management

1. Introduction

The economy of Swaziland is agro-based, with sugar predominance. Except for a few farmers on the plantation estates, most of the producers are subsistence farmers depending mostly on rain fed agriculture. The government of Swaziland is currently implementing many projects to expand irrigated agriculture to small holders and commercialize agriculture. There is mounting pressure for food. The incidence of poverty is high, in particular in rural areas and among women. According to the UNDP Human Development Report, the Gender Empowerment Index for Swaziland is poor (0.366) and nullifies its relatively better Gender-Related Development Index (0.563), revealing the presence of structural and traditional barriers that need to be corrected (UNDP, 1997). Gender balanced

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development is an important national goal. Appropriate policy measures and actions to attain this goal have to be informed by knowledge on the existing gender roles and relationships and their implications on resource use. This study provides information on gender roles and relationships at household level and attempts to establish their implications for water management.

2. Gender

Gender reflects a set of behavioural norms ascribed to men and women in a given social group or system. Gender thus reflects attitudes and beliefs that a particular cultural group considers appropriate for males and females on the basis of their biological sex. Allocation, distribution, utilization and control of resources reflect gender relations embedded in both ideology and practice. In most parts of the world, there exist gender biases, which disadvantage women. However, gender is not a static condition; it differs across cultural, geographical and temporal contexts. It is contingent on factors such as age, class and tribe. Therefore it is wrong to assume homogeneity amongst women (Mehta and Srinivasan, 2001).

Gender analyses examine the ways in which men and women interact with each other and the gendered nature of their roles, relations and control over resources (Mehta, 1997). Women and men are heterogeneous constituencies with many internal differentials undercutting their varied social locations (Mehta and Srinivasan, 2001). Women are usually not equal partners when communities create property rights over any resource (Manundu, 2005). Also, it has been observed that men and women as water users or managers are differential stakeholders in any water demand policies and procedures (Loza, 2005). It is thus imperative to examine gendered dimensions in the access and use of water resources. Their differential roles, needs, and concerns should be accommodated in the planning, implementation, and evaluation of strategies and projects. Special procedures need to be developed to ensure effective representation of the needs and concerns of women as well as men.

Gender needs and interests are influenced to a great extent by gender roles and relationships. Men and women play different roles. Gender role is a set of behavioural norms associated with males and females respectively, in a given social group or system (Wikipedia, 2006). There are three main categories of gender roles, productive, reproductive and social/community tasks. Productive tasks are those undertaken to reproduce the labour force such as child bearing and rearing, feeding the family and caring for the sick. Productive work is done for payment in cash or kind and includes the production of goods and services for subsistence or market purposes. Community tasks are activities done not for the individual family gain but for the well-being of the community. The three roles are not entirely distinct and may overlap. Men are mainly involved in productive and community tasks while women play these "triple" or multiple roles (Syed et al., 2003).

There is need for a planning approach that takes into account the very different roles and needs of women and men. This is necessary to allow women to participate in development, make them more productive, independent and empowered. Also, as more households become headed by women as is the case with Swaziland, it is important to realize the differences that the gender of the household head has on access, use of resources, production, food security and nutritional status of the children. It also becomes increasingly important for water management to be accountable to women's "triple roles".

Changes in production caused by irrigation may cause profound changes in social and gender relations in a community (Mehta and Srinivasan, 2001). Sometimes irrigation can lead to food insecurity because of the shift to cash crops, thus increasing household dependency on the market (GWA, 2006). Shifting from dry land to irrigated agriculture entail massive changes in the division of labour between men and women. The changes will not be felt equally by all men and women, but will depend on their class and social standing. The switch from subsistence agriculture to commercial cropping also affects women and men differently, e.g. greater reliance on market, capital and fertilizers (Mehta and Srinivasan, 2001). Irrigated agricultural schemes can restructure food production, consumption and distribution patterns (World Commission on Dams, 2001). Shifting from rain fed to irrigated agriculture may be accompanied by introduction of new crops, increased or reduced labour demand, altered agricultural cycles, new production technologies, and an increased influence of commodity market prices. These changes could mean greater food insecurity or greater vulnerability for certain social groups, while bringing prosperity for other groups. It is thus important to understand what the gains and losses are and how they are distributed. This study helps understand this vulnerability by showing how resource allocation decisions regarding productive assets, in particular irrigated sugar cane production, rests primarily in the hands of men. Women's limited control over productive resources, for example grasses, exposes them to a level of vulnerability and insecurity that is gender determined. At the same time, as heads of households, women are engaged in the same activities as their male counterparts. This suggests that there is scope for changing unequal gender relations attached to resource use. Government policy must be sensitive to these conditions if women are to benefit from the shift toward irrigated cash crop production among smallholder households and communities.

As Swaziland's water policy is still in draft form, there is both time and space to embed gender sensitive approaches to resource access, allocation and usage. However, current management of water resources is somewhat ad-hoc whereby decisions are taken through several uncoordinated pieces of legislation spread amongst a number of ministries as well as other institutions outside government (Swaziland

Water Sector Committee, 2001; Mwendera et al., 2002). The Draft National Water Policy for the country is gender sensitive and tries to correct the existing imbalances as reflected by some of its clauses. According to this draft policy (Swaziland Government, 2001), under water supply and accessibility for basic human needs, women shall be represented at all levels of water management and water supply projects shall be geared towards improving opportunities for women and other disadvantaged groups.

3. Methodology and study area

3.1. Study approach

The method used in this study was gender analysis. Gender analysis refers to a systematic way of looking at the different impacts of development on women and men (GWA, 2006). Gender analysis examines differences and similarities in roles to see power imbalances in relations, needs, constraints, opportunities and impact of these differences. It also challenges assumptions and poses questions on who is doing what, who owns what, who makes decisions about what and who benefits. Gender roles and relationships at household level were identified and their implications on the access and use of resource and resource products in rural agriculture established. The roles considered in this study were those performed by men and women as heads of households as well as those performed by married women under male households. The roles were limited to only productive and reproductive as community/social roles were not included. The relationships studied were those between husband and wife under households as manifested in decision making in production processes. The decisions covered were those made in deciding the investments to be done, the inputs to be used, the disposal of the products and the use of income generated. Although there were many resources and resource products, this study considered only land and products.

3.2. Study area

The study was based in Makhosini, a typical rural Swazi community located in the southern part of the country, in Shiselweni region. The area has an important history for the Kingdom, as the hill where the famous Swazi kings are buried is located in this community. The main socio-economic activities are subsistence maize farming, some commercial sugar cane and livestock rearing.

3.3. Selection of study subjects

The main sources of information were men and women heads of households and married women under men headed households, selected through purposive sampling. The sample size was 40 men heads of household, 40 women heads of household and 40 women married to the head of households, giving a total sample of 120 respondents for the whole study. The limitations of this sampling were that it included only the relatively older members (married and widows) and excluded young, unmarried and widowers who undertake certain roles and relationships in their households and have implications on use and benefits of development initiatives. The socio-economic status was also not considered during sampling while it could influence the roles and relationships. Also, there were no specific questions asked regarding water resources use and management. Thus, where conclusions are made regarding water resources, these are mainly inferred from the data. Also, as the questionnaires were structured there was no room for nuance in answers. The picture drawn therefore is a crude one and the findings are clearly indicative rather than definitive. The implications for this method are that there is still need for wider studies to cover the diversity of individuals within households, and work with larger samples and include specific questions regarding water resources use and management to make the results more definitive.

3.4. The instruments

Two structured questionnaire were prepared and administered to the sampled respondents, by face to face interviews. Questionnaire one was administered to the men heads of households and their wives. The men heads prioritized their roles as heads of households and the general roles of men within the household. The men heads and their wives were also asked to indicate as to whether they were involved in making decisions in terms of investments done, inputs used, disposal of products and use of income on their main production and products. The second questionnaire was applied to women heads who were asked to prioritize their roles as heads as well as the general roles of women within the household.

3.5. Data analysis and presentation

Gender analysis requires separating data by sex and understanding how labour is divided and valued (GWA, 2006). The completed questionnaires were analysed in terms of roles played by; male and female as heads of households, wives to heads of households, and men and women in general. Analysis of gender relationships was done by enumerating and comparing the number of responses on decisions made between men and women under investments made; inputs used; disposal of products and use of income. The results are presented using figures.

4. Results and discussion

4.1. Gender roles at household level

Gender roles considered in this study were those played by men and women in general as well as those played as heads of households. The results of this study showed that

men and women performed different roles within male-headed households. The data suggests, however, that being head of household is a gender-neutral role as both men and women displayed the same array of priorities as heads of household. However, the data masks the classic double-day nature of the role of female household heads. This is a deficiency in the structured nature of the questionnaire.

4.1.1. Roles of men and women in general

The most important roles for men as seen in Fig. 1 were mainly productive (87.5%), and these included wage employment, ploughing, herding cattle and some carpentry. Men in general gave very low priority to reproductive roles. Such roles were limited to overseeing the well fare of the family and clearing the house compound from bush encroachment.

Roles of women under female heads as indicated by women heads interviewed or as wives to male heads of household, gave very high priority to reproductive roles (Figs. 2 and 3) such as child bearing/care, cooking, washing, cleaning the house and gathering fire-wood. Although reproductive roles came first to women who were not heads, productive roles such as ploughing, weeding and harvesting were also important and ranked as high as a third priority. When the roles of the three groups of women were compared (Figs. 2, 3 and 5) showed interesting results. Most women respondents play the double-day roles, but when they are not heads of households they give higher priority to reproductive than productive roles. Women as heads of households try more to balance their "double-day" roles, as while their first priority was productive for survival; reproductive roles were ranked very highly as a second priority. Priority 1 and 2 for most women without the headship responsibility were reproductive only, the "double-day" appeared more from the third priority. Also, a greater divergence in the priorities between productive and reproductive roles is observed among the women heads

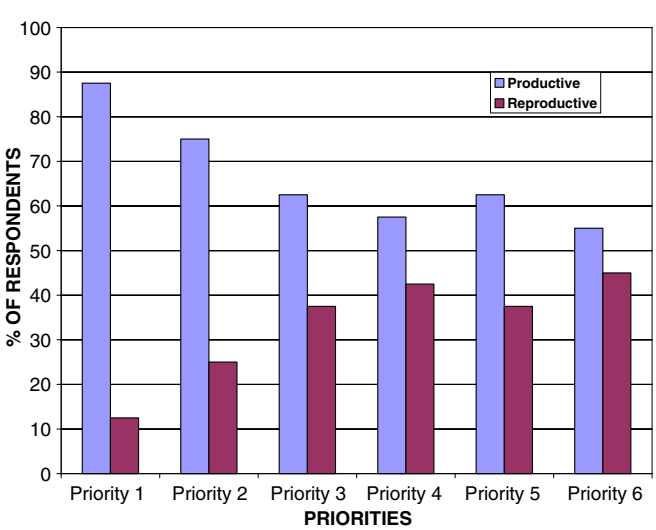

Fig. 1. Roles of men in male headed households (Makhosini community).

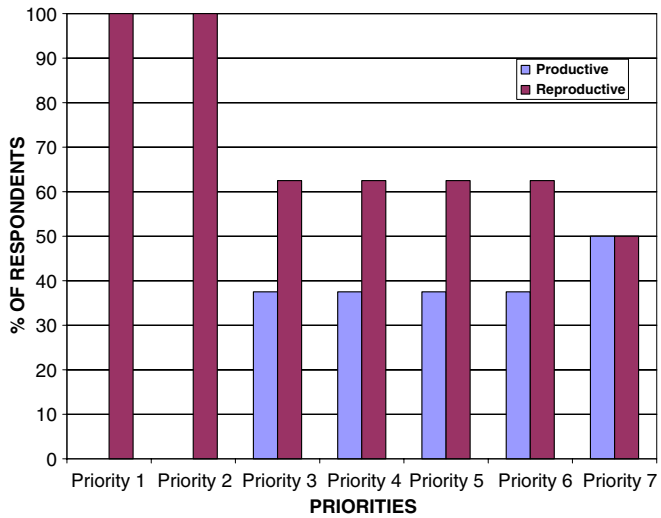

Fig. 2. Roles of women as wives in male headed households (Makhosini community).

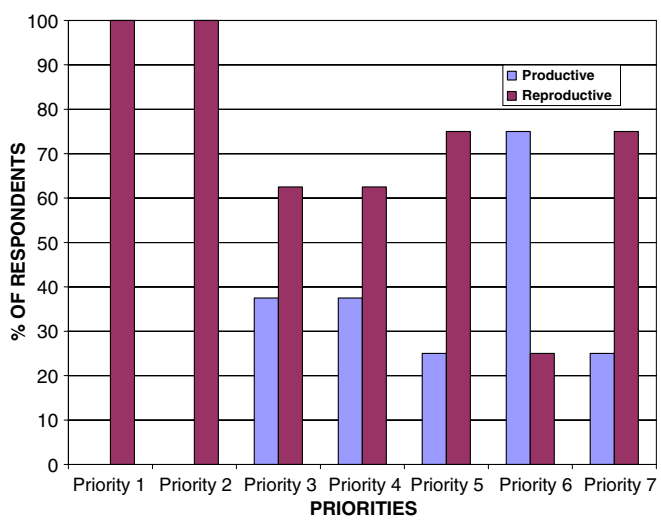

Fig. 3. Roles of women in female headed households (Makhosini community).

and those under them compared to wives to heads, but unfortunately can not be explained by the data.

A comparison of roles performed by men (Fig. 1) and wives (Fig. 2), indicate that men play productive while women undertake reproductive roles. As ploughing was not ranked very high by the wives, it means the fields they weeded and harvested were their husbands. This, as observed by Mehta and Srinivasan (2001), result from the gendered division of labour which assigns tasks such as weeding to women. These results have implications for water management in Swaziland where many men migrate to towns and outside the country for work or when incapacitated or die from the high rate of HIV and AIDS. The women left behind may stall decisions waiting for the male head that is working away from home. The widows, who are on the increase now, may not be able to handle production which was carried out by their husbands.

4.1.2. Roles of men and women as heads of household

The main roles of men as heads of household (Fig. 4) were found to be productive ones such as wage employment and ploughing. Interestingly, the roles of women as heads of household (Fig. 5) were found to be similar to those of men heads of household. Women heads of household were also found to pay very high priority to productive roles such as working for income for their families and ploughing the fields besides their reproductive roles. Based on these results it is clear that when women head households play "double-day" as they fully assume productive besides their reproductive roles.

4.1.3. Summary and conclusions on gender roles

Men and women in general were found to play different roles. The roles for men were found to be more on productive activities, while women played more reproductive roles. Women whether as wife to the heads, under women heads or heads of households played "double-day" roles. Gender roles for heads of households were found to be similar between the men and women acting as heads of households. The roles of women were found to change as women changed their position from ordinary women under male headed households to independent women heading their own households. When women assumed the position of head of household, they also assumed the productive besides the traditional reproductive roles. This means that women in general need access and use of resources to allow them to perform their "double-day" roles. Resource management in general, and in particular the spatial distribution, has to consider women's "double-day" roles in the development of infrastructure and services. Irrigation schemes set away from homes as is in some cases in Swaziland will not be utilized by women, whether heading households or wives to heads. Irrigation water schemes should be brought closer to homes to allow women juggle their many roles.

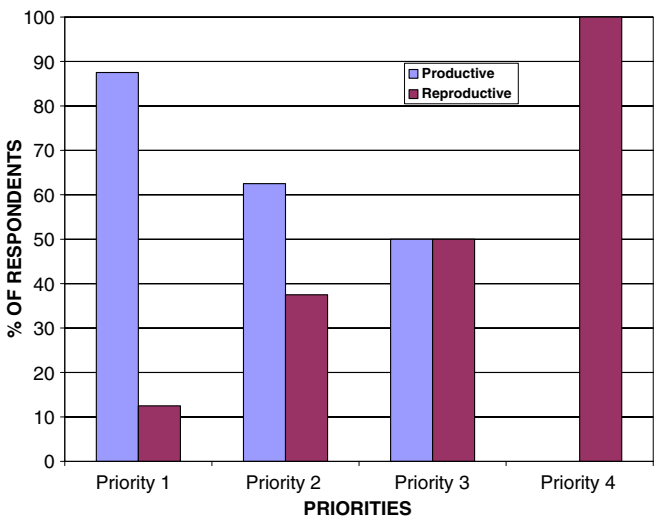

Fig. 4. Roles of men as heads of households (Makhosini community).

4.2. Gender relationships at the household level

Gender relationships were analyzed in the male headed households by establishing the involvement of husband and wife in making crucial decisions in the production processes as well as in the disposal of the products within the household. The crucial decisions considered were those made on investments to be made in production, the inputs to be used on crops, the disposal of products and the use of income from crops produced.

4.2.1. Gendered decision making on investments to be made in production

Analysis of the data on decision-making in investments for production (Fig. 6) reveals a clear gender-bias. Overall, more men (57.6%) were involved in these decisions than

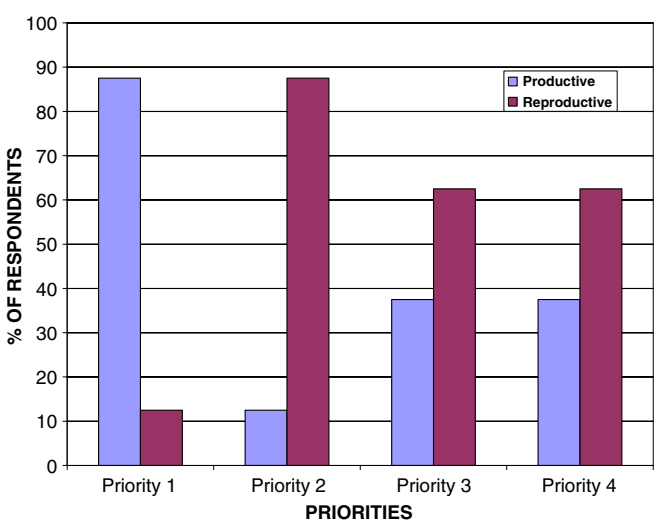

Fig. 5. Roles of women as heads of households (Makhosini community).

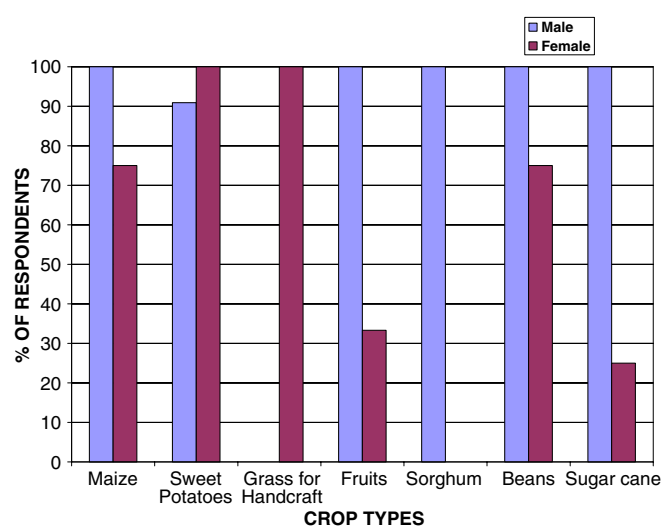

Fig. 6. Gendered decision making on investments to be made.

were women (42.4%). Moreover, decisions on investments in relation to the different crops produced revealed further gender differences. All men (100%) were involved in the investment decisions of the high income yielding crop, sugar cane. Fewer (20%) women were involved in the decisions on the investments to be made on sugarcane. Men also predominated on the decisions on investments to be made on food crops which could also be sold for cash like maize, sorghum, beans and fruits. Women were found to predominate only in making investment decision on grass used for making handicrafts (100%) and sweet potatoes (54.5%). Women in the production of sweet potatoes and handcraft invest time and labour resources which are sometimes negated because they are not cash. These results show that men as husbands and heads of households are more involved in the cash crops while women as wives under male heads predominate in subsistence production. As sugar cane is the main irrigated crop, decisions on irrigation water are to great extent made by men. In the households where decisions have to be stalled in the households where wives are not involved in decisions when the male head of household is away working in town or outside the country. Also, wives who are not involved in production decisions have lower chances of influencing irrigation schemes to suit their "double-day" roles.

However, the earlier finding that heads of household irrespective of sex have relatively equal powers, though clearly it is more difficult for women to manage their time and gain access to resources, suggests that there is space to undo the gender bias in decision making on key resources as some women do make these decisions but only as heads of households. This suggests that Swazi society accepts women as key decision makers in certain contexts, even those that are highly masculine zed.

4.2.2. Gendered decision making on inputs used on crops produced

Decisions on input use (Fig. 7) were found to be dominated by men (57.2%). All men respondents (100%) were involved in decisions on inputs to be used on sugar cane, beans, sorghum, fruits and maize. Equally high proportions (90.9%) of men respondents were found involved in input decisions for sweet potatoes. Decisions on inputs to be used on grass and sweet potatoes were again the prerogative of women respondents. Women respondents were also significantly involved in input decisions on beans (75%) and maize (75%). Fewer, but significant percentage of women respondents (25%) were involved in the decisions on inputs for sugar cane. In the production of sorghum, women were only involved in the decisions on investments to be made (28%), but not in decisions on inputs or disposal of the crop. This is possibly because sorghum is among the minor crops which grown by very few for purely household uses such as soft porridge and at times home brew. None of the interviewed households sold sorghum for cash and this is why there are no decisions made on the use of income from sorghum.

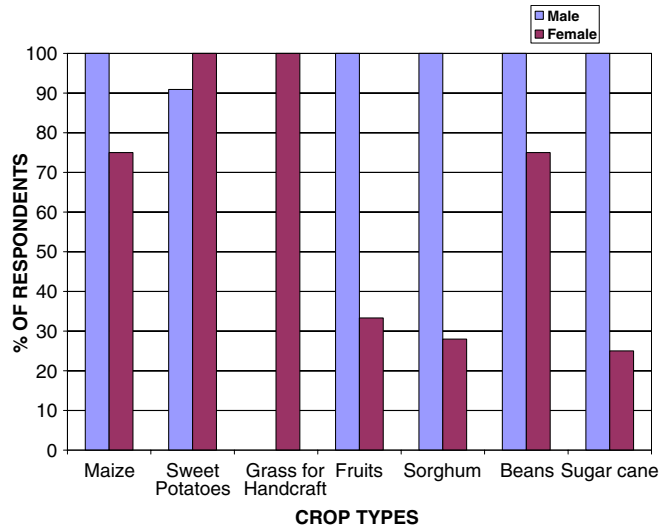

Fig. 7. Gendered decision making on inputs used on crops produced.

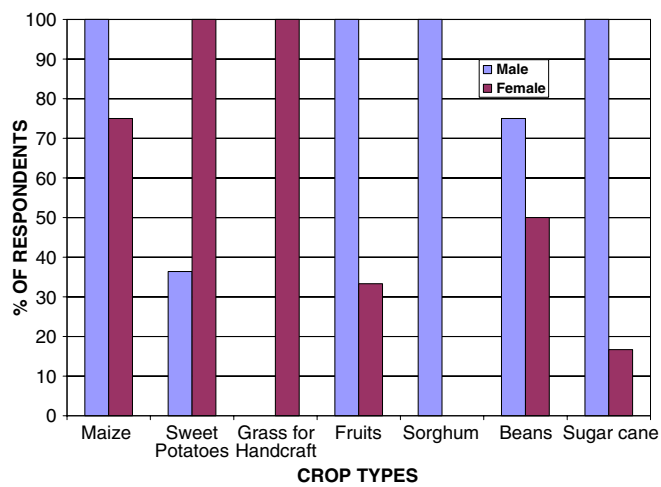

Fig. 8. Gendered decision making on the disposal of products.

4.2.3. Gendered decision making on the disposal of products

The results (Fig. 8) show that men predominate (52.6%) in the decisions on the disposal of products. All men (100%) were involved in the decisions on the disposal of sugar cane, fruits, maize, and sorghum. Men also dominated in decisions on the disposal of beans (75%). All women (100%) were found to be involved in decisions on the disposal of grass products and sweet potatoes. Women were also significantly (75%) involved in decisions on the disposal of maize. However, women were lesser involved in the decisions on the disposal of sugar cane (16.7%) and fruits (33.3%).

4.2.4. Gendered decision making on the use of income from crops produced

Although men were found to dominate in most decisions made, the situation was extreme in decisions on the use of income (Fig. 9). More men (61%) were involved in this

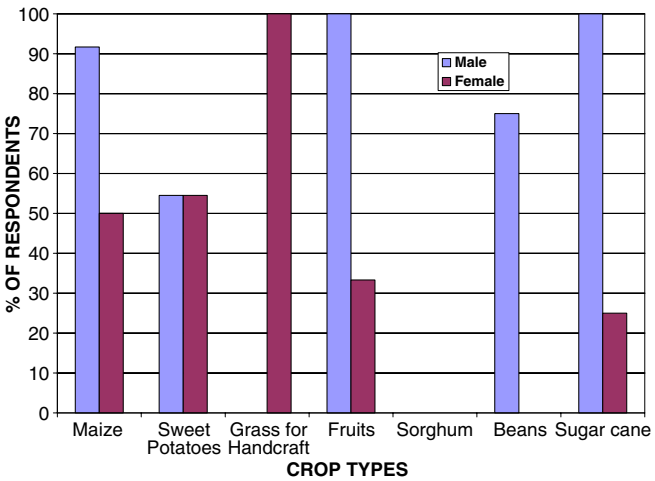

Fig. 9. Gendered decision making on the use of income from products.

decision compared to only 39% of women involved. All men were involved in the decisions in the use of income from sugar cane and fruits. A very high percentage of men were also found involved in the decisions on the use of income from maize (91.7%) and beans (75%). Women outnumbered men only in decisions in the use of income accrued from the sale of handicrafts made from grass which generates significantly less income than other crops but important in terms of its contribution to overall household income, particularly that controlled by the women. Other areas where women were found to be involved significantly was in the decisions on the use of income from sweet potatoes (54.5%), beans (50%) and maize (50%). Fewer women were (25%) involved in the decisions on the use of income from the most profitable and irrigated crop, sugar cane.

4.2.5. Summary and conclusions on gendered relationships

Decision making on investments, production and disposal of products, in particular on high income yielding crops, is dominated by men. The high income yielding crop is sugar cane, which uses most of the irrigation water. The decision on the use of income from sugar cane is also dominated by men. Women are left to make full decisions on the crops with time and labour investments, do not use irrigation water and with meagre income. Men dominate in the decisions on food crops as well, especially those which can also be sold for significant cash returns such as maize, beans, fruits and sweet potatoes. It is important to note that a significant percentage of women are also involved in the decisions on cash crops. As an example, between 50–75% of women are involved in various elements in decision making on cash crops such as maize and beans, all (100%) are involved in sweet potatoes and 18–25% in sugar cane. This is an important finding as it means that not only are women heads of households involved in these decisions, but also women under men headed households. This suggests room for de-gendering decision making across crops, including sugar cane.

At a certain level within the household, whether as female head or as wife of head, women do have influence over the allocation of key resources, such as investments (75–100% on maize, beans, sweet potatoes and grass); inputs (75–100% on maize, beans, sweet potatoes and grass); disposal and use of income of cash crops including high value crops such as sugar cane (18–25%). However, the data also reveals abiding gender biases within household divisions of labour as exhibited in the extreme ends of grass for thatching/handcrafts (a feminine activity) and sugar cane (a masculine activity), as well as traditional caring activities (feminine) and providing activities (masculine). However, these strict roles blur as women assume the role of head of household. At the same time, these women assume "double-day" roles as they continue with traditional feminine activities (cooking, cleaning and child care) as well as taking on traditionally masculine activities of providing for the family.

The implications for water policy suggest that the shift toward irrigation and away from rainfed may shift decision making away from a relatively gender balanced practiced observed in the case of maize, beans and sweet potatoes toward a male-biased practice as seen in sugar cane. The data also shows a continuing difficulty of women heads to engage in high-value crop production, but does it does not reveal why.

Swazi society may be amenable to more gender neutral decision making in regard to irrigated crop production as suggested by the data which shows that significant percentage of women respondents (25%) were involved in decisions on sugar cane. However, there is need to investigate the reasons why female household heads face difficulties in becoming more centrally involved in this practice. It may be a time constraint due to the double-day or it may be resulting from the prevailing gender-bias in the society where women are routinely discriminated against at various levels of life as well as in access to certain resources (UNDP, 2001). Depending on the cause, particular interventions will have to be tailored to change this bias.

The implications for household food security suggest that a swift move to irrigated agriculture may increase food insecurity in female headed households.

Lastly, water management should meet the many and sometimes competing tasks even at household level. Water schemes have to be gender sensitive and take into consideration the different roles, needs and relationships both at the community and household level. The technological options in the provision of water services should take care of the different users, women, men and children, as well as the different uses.

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